

cavity should be both complete and continuous. Antiseptic treatment of the cavity should be instituted as promptly and thoroughly as conditions permit. In cases not complicated by bronchial communications with the empyema cavity a neutral solution of sodium hypochlorite, 0.5 per cent. (Dakin's solution), may be used effectively in cleansing and disinfecting the cavity. In recent cases, with free access to all parts of the cavity, dichloramin-T, 5 per cent., dissolved in chlorosane, may be substituted for Dakin's solution; but if there is a thick fibrinous deposit upon the pleural surfaces this is less readily removed and drainage more difficult to maintain than when Dakin's solution is employed. In applying chlorin antiseptics (Dakin's solution or a chlorosane solution of dichloramin-T) the following conditions should receive attention: free drainage; contact of the solution with all parts of the cavity, which is best attained by the use of Carrel tubes; adequate quantities of the solution must be used with sufficient frequency to maintain its action over the period of time necessary for disinfection; the progress of disinfection may be followed by bacteriological examination of the discharges; when the empyemic cavity has become cleansed beyond the point characterized by a viscid secretion from the wound there is usually evidence of increased freedom for expansion of the lung; the danger of such cicatrical fixation of a compressed lung is an indication for prompt operation and cleansing of the empyemic cavity after the acute stages of the disease have passed; expansion of the lung can be encouraged and perhaps accelerated by various procedures, such as (1) blowing against resistance; (2) the use of negative pressure and gentle suction devices; (3) properly controlled exercises which induce not only a more active metabolism but also more active breathing; the influence of such measures can be directly observed, but unless they can be maintained over a period at least long enough for agglutination between the surfaces to take place it is doubtful whether they materially hasten obliteration of the pleural cavity. For roentgen-ray examination of old cavities with fistulas it has been found that the thorium nitrate in 10 and 15 per cent. solution is satisfactory; its advantages over pastes of various kinds are its ease of introduction and of withdrawal.

THERAPEUTICS

UNDER THE CHARGE OF

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Etiology and Treatment of Pruritus Ani.—Out of 181 cases of pruritus ani examined, MURRAY (*Jour. Am. Med. Assn.*, 1918, lxxi, 1449) found *Streptococcus fecalis* present in 168. Examination of the blood of every patient showed that the coefficient of extinction of opsonins for *Streptococcus fecalis* was low, while in patients suffering from rectal

diseases without pruritus it was normal. Whether the infection occurred because of the low opsonic index or whether the opsonins were lessened because of the invading organism was not determined. Murray treated these cases by means of an autogenous vaccine. Of 113 cases treated in this manner, distinct relief was obtained in 99. Thirteen patients received little or no benefit, but only 4 of these received a sufficient number of treatments. Murray concludes that pruritus ani is caused by an infection by one of the streptococcus group or associated with it. This infection may be primary, secondary or the aggravating cause. Statistics of 4000 distinctly rectal cases show that only about 10 per cent. had pruritus ani, which is, he thinks, sufficient evidence that the appearance of pruritus in these conditions is merely coincidental. Murray believes that pruritus ani will not be improved by operative measures unless the phagocytic power of the blood be increased, and states that a relapse may be expected if the opsonic index of the blood is again lowered enough to allow a reinfection.

Treatment of Influenza Pneumonia by the Use of Convalescent Human Serum.—McGURE and REDDEN (*Jour. Am. Med. Assn.*, 1918, lxxi, 1311) found the mortality from pneumonia following influenza at first as high as 50 to 60 per cent.; later dropped to 30 per cent. Over 400 cases were treated at this naval hospital. Thirty-seven cases in all were treated by serum. Of these, 1 died, 30 are convalescent and 6 are still under treatment, all but 1 of whom have a favorable outlook. The serum was obtained from convalescent patients. The most beneficial results were obtained when the serum was given within the first forty-eight hours of the pneumonia complication. The dose of serum administered was from 75 to 125 c.c. intravenously, the majority of patients receiving about 300 c.c. The treatment was continued until there was no doubt about the recovery of the patient. If results from a serum were not obtained in the first twenty-four hours after its use the serum from another donor was used. Persistent attempts were made to test the potency of the serum of the donors by complement-fixation and by gross agglutination, using the influenza bacillus as an antigen; but so far the writers have found no method of testing the antibody content of the serum except by its clinical action. They conclude that, even making allowance for the lessened virulence of the organism at the time of observation, the serum from convalescent influenza pneumonia patients has a decided influence in shortening the course of the disease and in lowering the mortality.

Serum Treatment of Type I Pneumonia Occurring in Association with an Epidemic of Influenza.—During the epidemic of influenza at Camp Devens, pneumonia clinically atypical from the classical acute lobar pneumonia became very prevalent. A small number of these were demonstrated to be due to *Bacillus influenzae* alone. Of the patients showing clinical signs of pneumonia the usual percentage (20 per cent.) of Type I pneumococcus was demonstrated in the sputum. SPOONER, SELLARDS and WYMAN (*Jour. Am. Med. Assn.*, 1918, lxxi, 1310) report briefly the effect of Type I serum in these cases. Before the epidemic, serum of low titer was used in the treatment of typical

Type I lobar pneumonias. In this group there was a mortality of 20 per cent. During the epidemic, with essentially the same treatment, there was a mortality of 43 per cent. At the height of the epidemic a supply of high titer serum was obtained. This was administered to 15 patients, 14 of whom recovered—a mortality of 7 per cent. The patient who died was in an extremely critical condition at the time of administration of the serum. An unusually high mortality (50 per cent.) in Type II cases of pneumonia was found during the influenza epidemic. The writers conclude that it is inadvisable to inject pneumonia patients with large quantities of low-grade serum.

The Rat and Poliomyelitis.—From the experiments here reported, AMOSS and HASELBAUER (*Jour. Exp. Med.*, 1918, xxvii, 429) conclude that it is improbable that the rat acts in nature as the reservoir of the virus of poliomyelitis.

OBSTETRICS

UNDER THE CHARGE OF

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Cesarean Section for Eclampsia.—INGRAM (*Am. Jour. Obst.*, June, 1918) reports the case of a patient weighing about 200 pounds admitted to the hospital in convulsions and semicomatose. She was a primipara, aged thirty years. On vaginal examination the cervix was long and firm, the vagina very long and small, so that the presenting part could be felt with difficulty. During one and a half hours after admission she had five severe convulsions, and Cesarean section was immediately performed. It was found that the patient had twins. Both children were dead at delivery. The patient's convulsions ceased at the operation, but on the tenth day the patient suddenly became cyanosed and died. Autopsy gave no information as to the cause of death; there were no signs of infection, but there was a large quantity of serous fluid throughout the peritoneal cavity. His second case was thirty-nine years of age, a primipara, a very large woman, having a blood-pressure of 160 systolic. Internal examination showed a very long, firm, conical cervix, with no dilatation. The patient had four severe convulsions in the two hours following admission. At section the abdominal wall was very thick and boggy and there was a large quantity of fluid in the peritoneal cavity. The operation proceeded without special difficulty, but on the following morning the patient had a convulsion and also one in the evening. She steadily improved, and six days after operation the urine showed a very faint trace of albumin. The abdominal wall broke down and the wound did not unite; under anesthesia the edges of the wound were freshened by rubbing with a hot abdominal pack and silkworm-gut sutures were introduced, and ultimately she made a good recovery, with an excellent abdominal scar.